

CLAIMS

1. Moxifloxacin hydrochloride form A, characterized by an X-ray diffraction spectrum having the following principal peaks:

Angle (2 θ)	D (Å)	Rel. Intens. (I/I ₀)
5.815	15.1858	49.8
7.220	12.2335	100.0
8.575	10.3032	86.1
10.335	8.5522	87.2
12.310	7.1842	19.4
13.200	6.7018	17.0
14.085	6.2826	16.3
14.535	6.0891	11.1
14.870	5.9527	20.6
15.185	5.8299	17.6
15.675	5.6487	1.9
16.620	5.3296	18.3
17.335	5.1114	60.1
17.850	4.9650	80.9
19.315	4.5916	53.7
19.760	4.4892	19.1
20.375	4.3551	2.5
21.640	4.1033	47.6
22.295	3.9842	12.7
23.160	3.8373	4.2
23.625	3.7628	1.9
24.705	3.6007	26.9
25.115	3.5428	17.6
25.815	3.4483	15.6
26.440	3.3682	39.4
27.365	3.2564	36.3
27.970	3.1874	17.8
28.360	3.1444	14.5
29.015	3.0749	28.2
29.965	2.9795	13.9
30.545	2.9243	4.8
31.575	2.8312	5.9
32.270	2.7718	12.2
33.900	2.6421	6.4

2. Moxifloxacin hydrochloride form A, characterized by an X-ray diffraction spectrum as shown in Figure 1.

3. Moxifloxacin hydrochloride form A, characterized by a solid-state ¹³C-NMR spectrum as shown in Figure 2.

4. Moxifloxacin hydrochloride form A, characterized by an IR spectrum as shown in Figure 3.

5. Moxifloxacin hydrochloride form A, characterized by a DSC graph as shown in Figure 4.

6. A method for the preparation of moxifloxacin hydrochloride form, A which comprises the steps of:

- a) suspending moxifloxacin hydrochloride in a solvent selected from alcohols and polyols or mixtures thereof, in which the resulting mixture has an overall water content of between 2.5% and 0.01% by weight,
- b) heating the mixture under reflux,
- c) cooling, and
- d) isolating the product.

7. A method according to Claim 6 in which the moxifloxacin hydrochloride in step a) is in anhydrous or monohydrate crystalline form.

8. A method according to Claim 7 in which the moxifloxacin hydrochloride is in an anhydrous form having a water content of less than 0.3%.

9. A method according to Claim 6 in which the solvent is a C₁-C₆ alcohol or polyol, preferably ethanol or isopropanol.

10. A method according to Claim 6 in which the solvent has a water content of between 1% and 0.01%, preferably between 0.3% and 0.01%, more preferably between 0.1% and 0.01%.

11. A method according to Claim 6 in which the mixture is cooled to room temperature.

12. A method according to Claim 6 in which the solvent is used in a ratio of between 50:1 and 2:1, preferably between 30:1 and 5:1, more preferably about 10:1, the ratio being expressed as ml of solvent per gram of moxifloxacin hydrochloride.

13. A method according to Claim 6 in which the mixture is heated under reflux for at least 1 hour, preferably for about 4 hours.

14. A method for treating bacterial infections which comprises administering moxifloxacin hydrochloride form

A according to Claims 1 to 5 to a patient in need of such a treatment.

15. Moxifloxacin hydrochloride form A according to claims 1 to 5 for use as a medicament.

16. Use of moxifloxacin hydrochloride form A, according to claims 1 to 5, for manufacturing a medicament for the treatment of bacterial infections.

17. Pharmaceutical compositions comprising moxifloxacin hydrochloride form A according to Claims 1 to 5 and at least one pharmaceutically acceptable excipient.

18. Moxifloxacin hydrochloride form B, characterized by an X-ray diffraction spectrum having the following principal peaks:

Angle (2 θ)	D (Å)	Rel. Intens. (I/I ₀)
5.700	15.4919	24.0
7.200	12.2675	100.0
8.470	10.4307	18.9
8.820	10.0176	91.6
10.505	8.4142	44.0
11.405	7.7522	14.6
12.220	7.2369	5.9
13.200	6.7018	16.2
13.925	6.3544	18.1
14.415	6.1395	26.6
14.740	6.0049	49.9
15.395	5.7508	4.9
16.600	5.3360	20.7
17.180	5.1571	13.7
17.705	5.0054	68.7
18.710	4.7387	13.7
19.105	4.6416	26.2
19.865	4.4657	11.8
20.155	4.4021	7.6
21.055	4.2159	2.4
21.545	4.1211	16.9
22.155	4.0090	17.3
22.690	3.9157	11.8
22.905	3.8794	10.5
24.610	3.6144	18.7
24.955	3.5652	10.0
25.385	3.5058	7.0
25.815	3.4483	14.5
26.195	3.3992	16.3
26.605	3.3477	18.4
26.960	3.3044	28.7
27.265	3.2681	37.0
28.045	3.1790	9.0
28.730	3.1047	22.2
29.110	3.0651	8.5
29.745	3.0011	9.6
30.170	2.9598	6.2
31.440	2.8430	4.1
31.795	2.8121	1.9
32.145	2.7823	3.1
32.410	2.7601	2.5
33.385	2.6817	1.8

19. Moxifloxacin hydrochloride form B, characterized by an X-ray diffraction spectrum as shown in Figure 6.

20. Moxifloxacin hydrochloride form B, characterized by an IR spectrum as shown in Figure 7.

21. Moxifloxacin hydrochloride form B, characterized by a DSC graph as shown in Figure 8.

22. A method for the preparation of moxifloxacin hydrochloride form B, which comprises the steps the steps of:

- a) suspending moxifloxacin hydrochloride in a solvent selected from alcohols and polyols or mixtures thereof, in which the resulting mixture has an overall water content of between 2.5% and 0.01% by weight,
- b) heating the mixture under reflux,
- c) cooling,
- d) isolating the product,
- e) reslurrying at reflux the solid in a solvent selected from alcohols and polyols or mixtures thereof, in which the resulting mixture has an overall water content of between 2.5% and 0.01% by weight and
- f) isolating the product.

23. A method according to Claim 22 in which the moxifloxacin hydrochloride in step a) is in anhydrous or monohydrate crystalline form.

24. A method according to Claim 23 in which the moxifloxacin hydrochloride is in an anhydrous form having a water content of less than 0.3%.

25. A method according to Claim 22 in which the solvent of steps a) and e) is a C₁-C₆ alcohol or polyol, preferably ethanol or isopropanol.

26. A method according to Claim 22 in which the solvent of steps a) and e) has a water content of between 1% and 0.01%, preferably between 0.3% and 0.01%, more preferably between 0.1% and 0.01%.

27. A method according to Claim 22 in which the mixture is cooled to room temperature.

28. A method according to Claim 22 in which the solvent is used in a ratio of between 50:1 and 2:1, preferably between 30:1 and 5:1, more preferably about 10:1, the ratio being expressed as ml of solvent per gram of moxifloxacin hydrochloride.

29. A method according to Claim 22 in which step e) is performed by heating the mixture under reflux for 1 to 4 hours, preferably for about 2 hours.

30. A method for treating bacterial infections, which comprises administering moxifloxacin hydrochloride form B according to Claims 18 to 21 to a patient in need of such a treatment.

31. Moxifloxacin hydrochloride form B according to claims 18 to 21, for use as a medicament.

32. Use of moxifloxacin hydrochloride form B according to claims 18 to 21 for manufacturing a medicament for the treatment of bacterial infections.

33. Pharmaceutical compositions comprising moxifloxacin hydrochloride form B according to Claims 16 to 19 and at least one pharmaceutically acceptable excipient.